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SEP 22 2005
PATENT & TRADEMARK OFFICE



*FIG. 1*

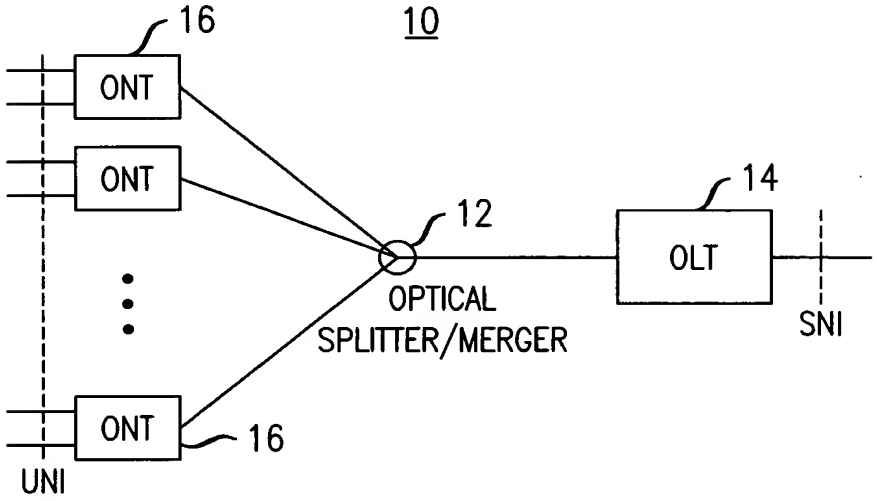



*FIG. 2*

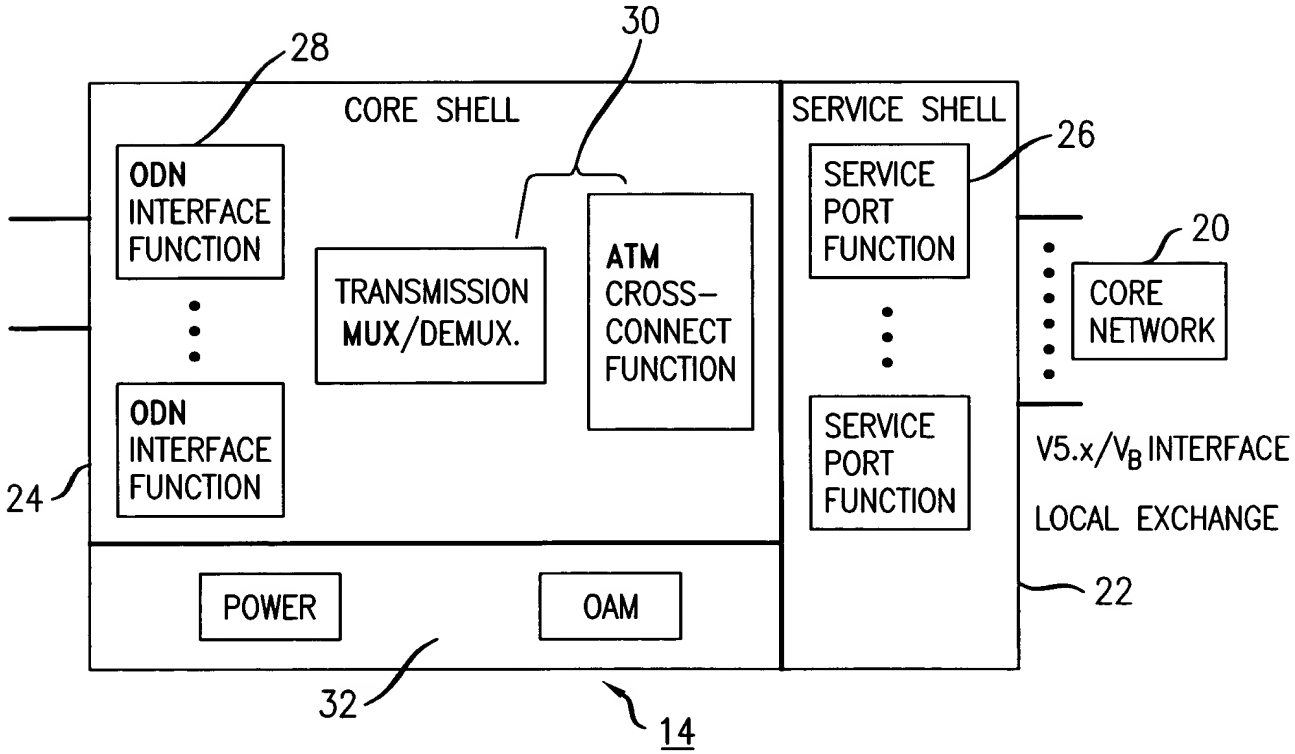
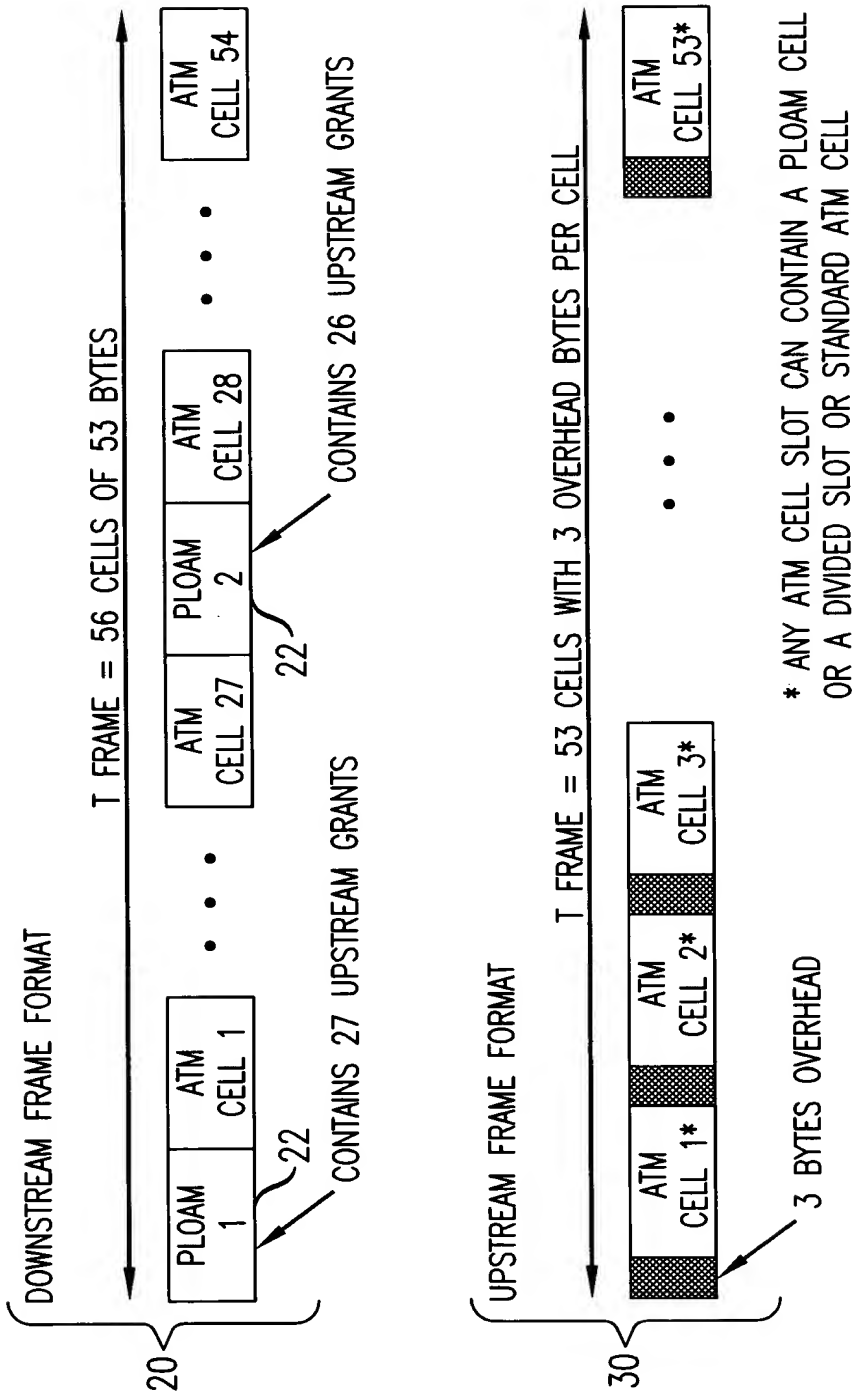


*FIG. 3*


DOWNSTREAM FRAME FORMAT
T FRAME = 56 CELLS OF 53 BYTES
PLOAM 1
ATM CELL 1
ATM CELL 27
PLOAM 2
ATM CELL 28
ATM CELL 54
22
CONTAINS 27 UPSTREAM GRANTS
22
CONTAINS 26 UPSTREAM GRANTS
20
UPSTREAM FRAME FORMAT
T FRAME = 53 CELLS WITH 3 OVERHEAD BYTES PER CELL
ATM CELL 1*
ATM CELL 2*
ATM CELL 3*
ATM CELL 53*
3 BYTES OVERHEAD
* ANY ATM CELL SLOT CAN CONTAIN A PLOAM CELL OR A DIVIDED SLOT OR STANDARD ATM CELL
30

3/5

*FIG. 4*

RECURSIVE IMPLEMENTATION OF GRANT GENERATOR USING MULTI–TABLES

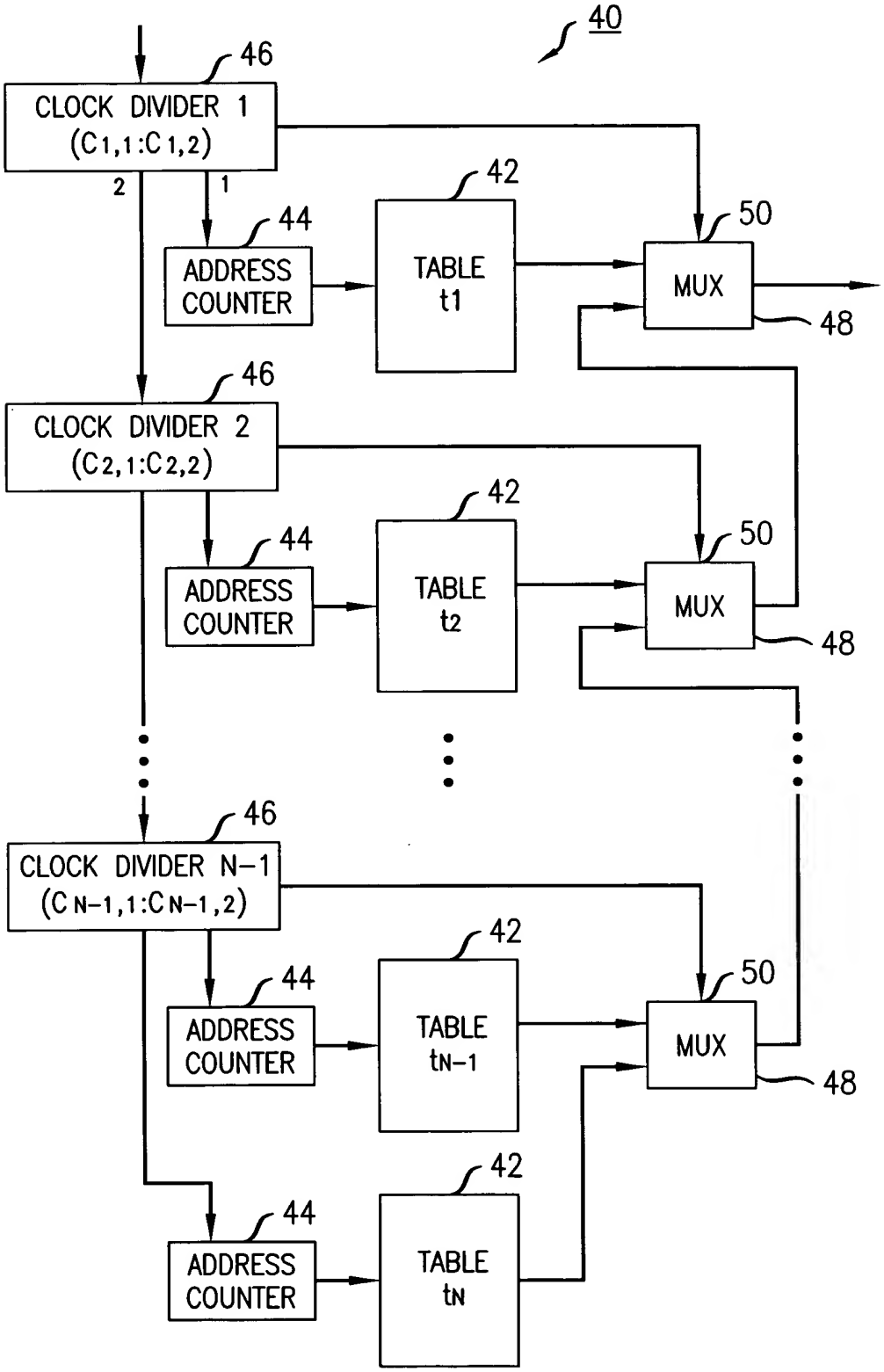


*FIG. 5A*

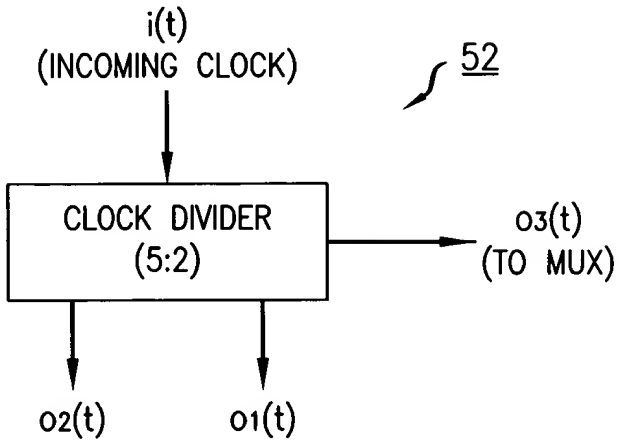



*FIG. 5B*

EXAMPLE TIMING DIAGRAM FOR INPUT AND OUTPUT SIGNALS OF CLOCK DIVIDER WITH DIVISION RATIO 5:2

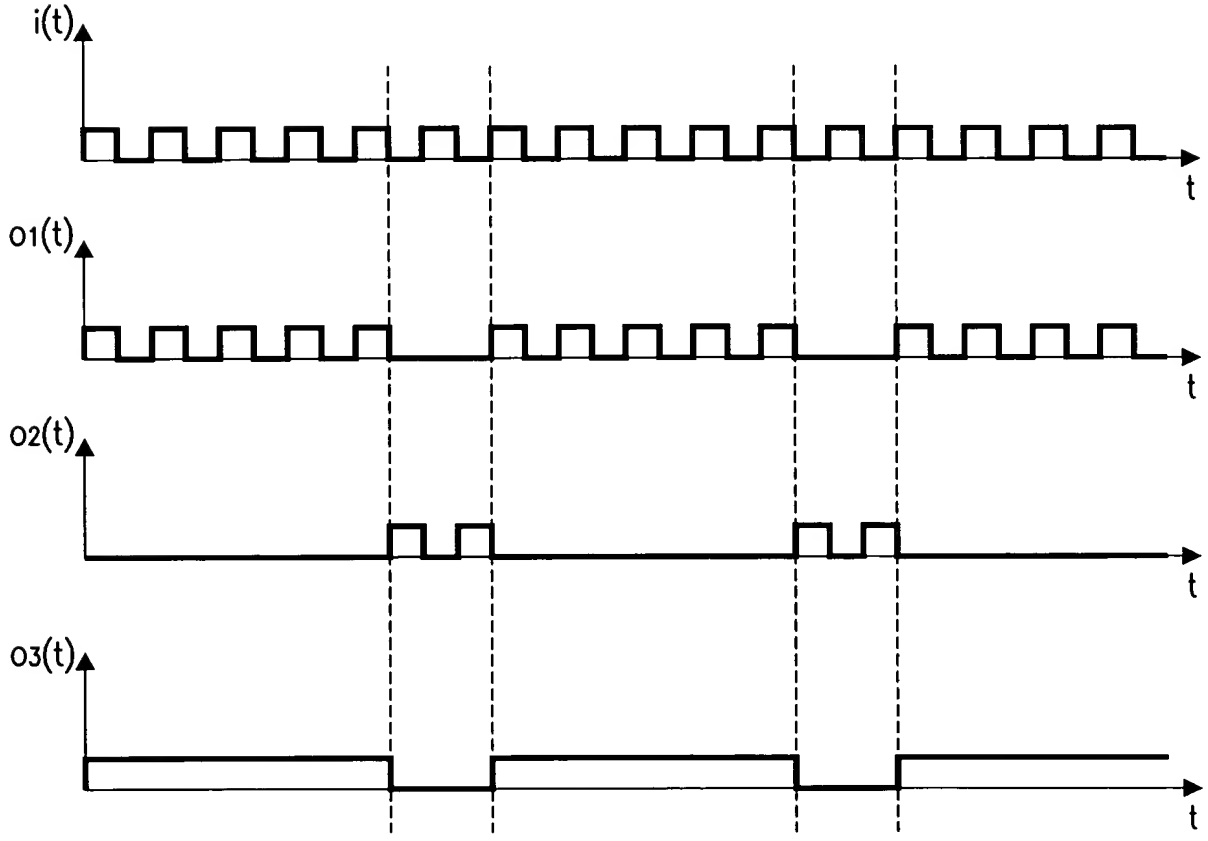


*FIG. 6*

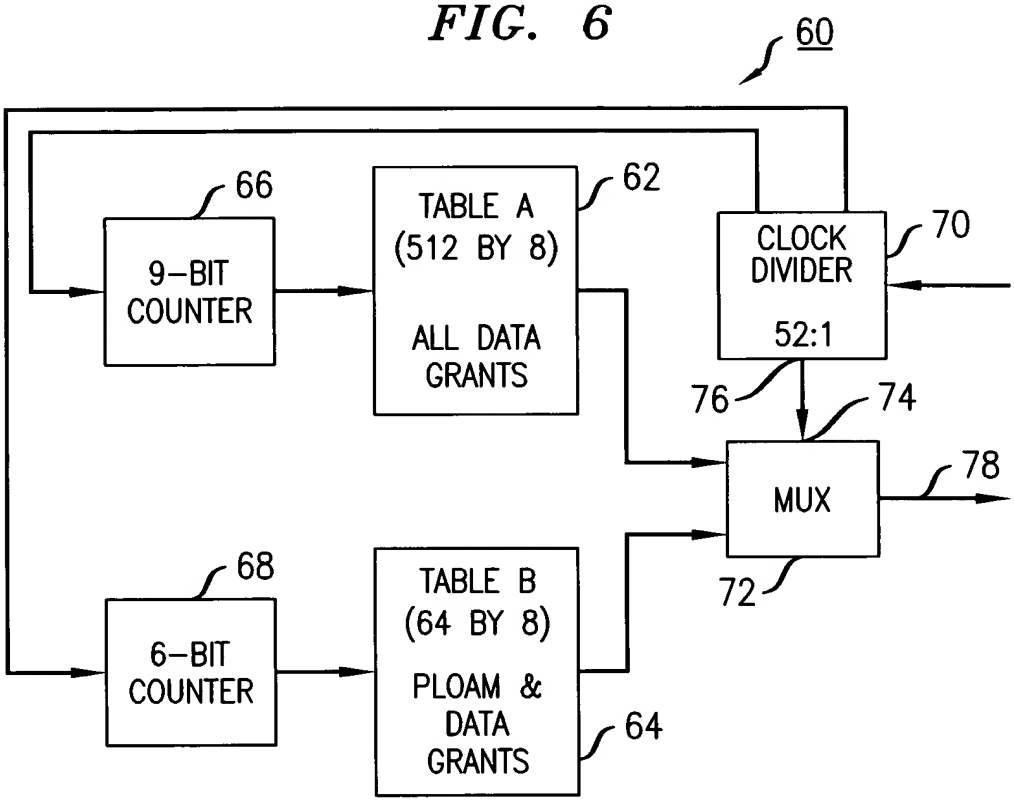
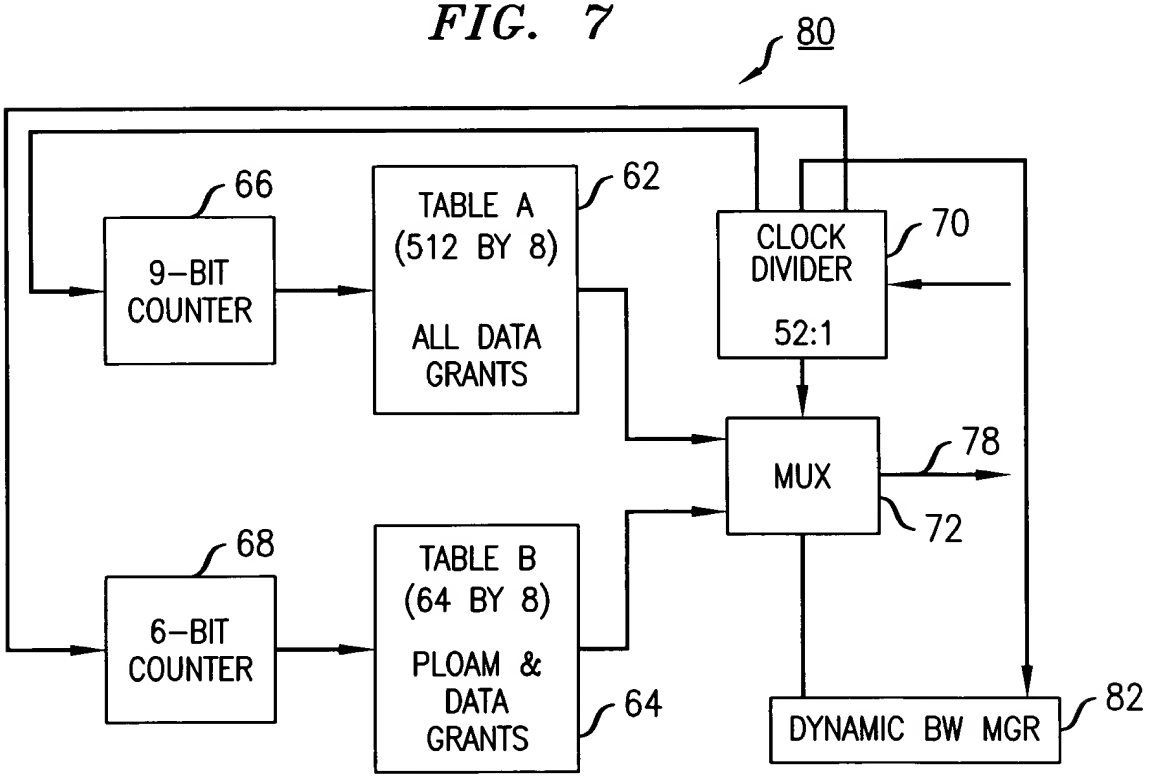

60
66
9–BIT COUNTER
TABLE A (512 BY 8)
ALL DATA GRANTS
62
CLOCK DIVIDER
52:1
70
76
74
MUX
78
72
68
6–BIT COUNTER
TABLE B (64 BY 8)
PLOAM & DATA GRANTS
64

*FIG. 7*


80
66
9–BIT COUNTER
TABLE A (512 BY 8)
ALL DATA GRANTS
62
CLOCK DIVIDER
52:1
70
MUX
78
72
68
6–BIT COUNTER
TABLE B (64 BY 8)
PLOAM & DATA GRANTS
64
DYNAMIC BW MGR
82